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Keith R. Derrington  
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102.140

April 3, 2007

*In re* Application of:  
**DiFoggio et al.**

Serial No.: 10/801,267

Filed: **March 16, 2004**

Title: **METHOD AND APPARATUS  
FOR CHEMOMETRIC ESTIMATIONS  
OF FLUID DENSITY, VISCOSITY,  
DIELECTRIC CONSTANT, AND  
RESISTIVITY FROM MECHANICAL  
RESONATOR DATA**

§ Group Art Unit: **2863**  
§  
§  
§ Examiner: **Sujoy K. Kundu**  
§  
§  
§  
§ Docket No.: **584-37008-USCP (102.140)**

**Via First Class Mail**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is a **Power of Attorney and Correspondence Address Indication Form**, **Statement under 37 CFR 3.73(b)** and **Copy of Assignment recorded with the USPTO at Reel 015118, Frame 0554** in the above-identified Application. Also enclosed is a **postcard** for acknowledgement of the enclosed documents.

Very truly yours,

Keith R. Derrington

KRD:dmk  
Enclosures



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PTO/SB/81 (06-063)  
Approved for use through 11/30/2005. OMB 0651-0035  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

**POWER OF ATTORNEY  
and  
CORRESPONDENCE  
ADDRESS  
INDICATION FORM**

Application Number	10/801,267
Filing Date	March 16, 2004
First Name Inventor	DiFoggio et al.
Title	Method And Apparatus For Chemometric Estimations Of Fluid Density, Viscosity, Dielectric Constant, And Resistivity From Mechanical Resonator Data
Art Unit	2863
Examiner Name	Sujoy K. Kundu
Attorney Docket Number	584-37008-USCP (102.140)

I hereby appoint:

☐ Practitioners at Customer Number:

OR

☒ Practitioner(s) named below:

Name	Registration Number
Matt W. Carson	33,662
Timothy M. Donoughue	46,668
Stephen A. Littlefield	27,923
J. Albert Riddle	33,445
Brian S. Welborn	39,065
Darin Duphorne	39,506
Keith R. Derrington	44,061

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number:

OR

☐ The address associated with Customer Number:

OR

☒ Firm or Individual Name  
Simmons & Derrington, L.L.P.  
Keith R. Derrington

Address 6750 West Loop South

Address Suite 920

City Bellaire State Texas Zip 77401

Country USA

Telephone 713-977-0723 Fax 713-552-0110

I am the:

☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

**SIGNATURE of Applicant or Assignee of Record**

Signature		Date	21 March 2007
Name	Timothy M. Donoughue	Telephone	(713) 625-5918
Title and Company	Division Intellectual Property Counsel, Baker Atlas Division of Baker Hughes Incorporated		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒ \*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**STATEMENT UNDER 37 CFR 3.73(b)**Applicant/Patent Owner: DiFoggio et al.Application No./Patent No.: 10/801,267Filed/Issue Date: March 16, 2004Entitled: METHOD AND APPARATUS FOR CHEMOMETRIC ESTIMATIONS OF FLUID DENSITY, VISCOSITY, DIELECTRIC, CONSTANT, AND RESISTIVITY FROM MECHANICAL RESONATOR DATABaker Hughes Incorporated, a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest  
(The extent (by percentage) of its ownership interest is \_\_\_\_\_ %)

in the patent application/patent identified above by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 015118, Frame 0554, or for which a copy thereof is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

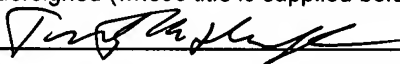
1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at  
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The document was recorded in the United States Patent and Trademark Office at  
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The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☐ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

  
\_\_\_\_\_  
Signature21 March 2007

Date

Timothy M. Donoughue(713) 625-5918

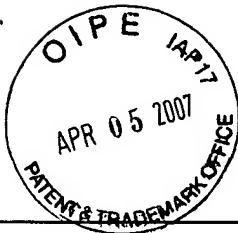
Printed or Typed Name

Telephone Number

Division Intellectual Property Counsel

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



LA  
COPY

UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

SEPTEMBER 13, 2004

PTAS

MADAN, MOSSMAN & SRIRAM, P.C.  
G. MICHAEL ROEBUCK  
2603 AUGUSTA, SUITE 700  
HOUSTON, TX 77057



\*102702512A\*

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OCT 13 2004

PATENTS

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/16/2004

REEL/FRAME: 015118/0554

NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

DIFOGGIO, ROCCO

DOC DATE: 03/10/2004

ASSIGNOR:

REITTINGER, PETER

DOC DATE: 03/10/2004

ASSIGNEE:

BAKER HUGHES INCORPORATED  
3900 ESSEX LANE  
SUITE 1200  
HOUSTON, TEXAS 77027

SERIAL NUMBER: 10801267

FILING DATE: 03/16/2004

PATENT NUMBER:

ISSUE DATE:

TITLE: METHOD AND APPARATUS FOR CHEMOMETRIC ESTIMATIONS OF FLUID DENSITY, VISCOSITY, DIELECTRIC CONSTANT, AND RESISTIVITY FROM MECHANICAL RESONATOR DATA

015118/0554 PAGE 2

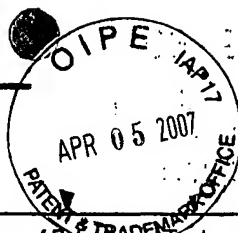
JEEVON JONES, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

Form PTO-1595 (Rev. 10/02) 3-16-04  
OMB No. 0651-0027 (e.g., 01/01/2005)  
Tab settings

U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

17302 U.S. PTO  
107801267

03/16/04



To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
**Rocco DiFoggio**  
**Peter Reitinger**

2. Name and address of receiving party(ies)

Name: **BAKER HUGHES INCORPORATED**

Internal Address:

**3900 ESSEX LANE, SUITE 1200**

**HOUSTON, TEXAS 77027**

Street Address: **SAME**

City: State: Zip:

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

☐ Other

March 10, 2004

March 10, 2004

Execution Date:

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: **3/16/2004**

A. Patent Application No.(s)

B. Patent No.(s)

**10/801267**

Others attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: **G. Michael Roebuck**

Internal Address:

**MADAN, MOSSMAN & SRIRAM, P.C.**

**2603 AUGUSTA, SUITE 700**

Street Address:

**SAME**

City: **HOUSTON** State: **TX** Zip: **77057**

6. Total number of applications and patents involved: **1**

7. Total fee (37 CFR 3.41).....\$ **40.00**

☐ Enclosed

☒ Authorized to be charged to deposit account

8. Deposit account number:

**02-0429 (584-37008-USCP)**

(Attach duplicate copy of this page if paying by deposit account)

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

**G. Michael Roebuck, Reg. No. 35,662**

Name of Person Signing

*G. Michael Roebuck*

Signature

**March 16, 2004**

Date

Total number of pages including cover sheet, attachments, and documents: **4**

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

03/24/2004 6TON11 00000004 020429 10801267

01 FC:8021

40.00 BA

## **ASSIGNMENT**

IN CONSIDERATION OF ONE (1) DOLLAR AND OTHER GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned, do/does hereby:

SELL, ASSIGN AND TRANSFER to **BAKER HUGHES INCORPORATED**, having a place of business at **3900 ESSEX LANE, SUITE 1200, HOUSTON, TEXAS 77027**, the entire right, title and interest for the United States and all foreign countries in and to any and all inventions and improvements which are disclosed in the application for United States Letters Patent, which has been executed by the undersigned and is entitled "**METHOD AND APPARATUS FOR DOWNHOLE FLUID CHARACTERIZATION USING CHEMOMETRIC ESTIMATIONS OF FLUID DENSITY, VISCOSITY, DIELECTRIC CONSTANT, AND RESISTIVITY FROM MECHANICAL RESONATOR DATA**", the specification of which is filed concurrently, such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions or improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions or improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND HEREBY REQUEST the issuing authorities to issue any and all United States and foreign patents granted on such inventions or improvements to **BAKER HUGHES INCORPORATED**;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purposes of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such improvements in the Assignee, and for securing, maintaining and enforcing proper patent protection for such improvements;

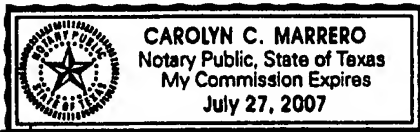
TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

IN WITNESS WHEREOF, the undersigned has hereunto subscribed his name on the date set opposite his signature.

(Signature) Rocco DiFoggio Date 3-10-04  
Name: **Rocco DiFoggio**

§  
§

BEFORE ME, the undersigned authority, on this 10<sup>th</sup> day of March, 2004, personally appeared, **Rocco DiFoggio**, the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.



Seal

Carolyn C. Marrero  
Notary Public



IN WITNESS WHEREOF, the undersigned has hereunto subscribed his name on the date set opposite his signature.

(Signature)

Name:

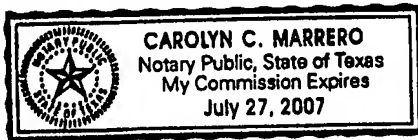
Peter Reitinger

Date

3/10/04

§  
§

BEFORE ME, undersigned authority, on this 10<sup>th</sup> day of March, 2004, personally appeared, **Peter Reitinger**, the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.



Seal

Carolyn C. Marrero  
Notary Public